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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/505,227

08/20/2004

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EXAMINER

CHRISS, ANDREW W

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/505,227	COUTURIER, ALBAN	
	Examiner	Art Unit	
	Andrew Chriss	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment: See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment, filed August 20, 2004, has been entered. Claims 1-14 are currently pending.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: R₁, R₂, R_A, and R_B. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means"

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and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because of the following grammatical items.

Language "concerns s a device" should read "concerns a device." Language "characterized in that it isi provided" should read "characterized in that it is provided." Correction is required.

See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: The specification lacks section titles (e.g., background, summary of the invention, brief description of the drawings, detailed description of the invention). Appropriate correction is required.

Claim Objections

6. **Claims 1-14** objected to because of the following informalities. All claims lack a definite article at the beginning of the claim language. As an example, Claim 1 should read "A system for controlling a data network..."

Further, **Claim 5** is a multiple dependent claim. As Applicant's preliminary amendment eliminates all other multiple dependent claims, it is not clear whether Claim 5 is intended to remain a multiple dependent claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 4, 8, and 13** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 lacks antecedent basis for the term "said reservation means."

Claims 8 and 13 contain claim language that is unclear based on the specification. Specifically, Applicant claims "the correlation means are adapted to anticipate flows of return packets" (Claim 4) and "adapted to anticipate return microflows" (Claim 13). However, the instant invention is directed to means that are *responsive* to a packet being received (emphasis added). For examination purposes, Examiner assumes that the claimed "anticipation" is equivalent to the correlation means handling bi-directional traffic, as described in Applicant's specification (page 4, lines 18-28).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-6 and 8-11** rejected under 35 U.S.C. 102(e) as being anticipated by Roberts (United States Patent Application Publication US 2002/0057699 A1).

Regarding Claim 1, Roberts teaches a system for controlling a data network 200, which includes a line card in a switch that receives a micro-flow data packet, which contains QoS characteristics (paragraph 0045). The switch performs functions to control elements in the data network, in that the switch schedules the transmission of the micro-flow data packets (Figure 6) and determines the path that will be taken (Figure 7). Further, in an exemplary embodiment shown in Figures 3A and 3B, only one of the microflows that are correlated contains a QoS field; therefore, the system contains means for correlating the QoS requests and control means effect the control only once for the correlated requests.

Regarding Claim 2, Roberts teaches the variables used to identify a data flow can include the protocol type, the source address, the destination address, the TCP/UDP source port number and the TCP/UDP destination port number (paragraph 0045), which was known in the art at the time the invention was made to comprise Applicant's claimed 5-tuple (e.g., see United States Patent 6,854,117 – column 11, lines 7-11).

Regarding Claim 3, Roberts teaches the examination of both the source address and the destination address, as discussed with regards to Claim 2 above.

Regarding Claim 5, Roberts teaches in Figure 6 that the network elements can be monitored atomically; that is, the resources are assigned (scheduled transmission) if and only if all of the resource reservation requests can be satisfied (step 642).

Regarding Claim 6, Roberts teaches in Figure 6 that a determination is made as to whether to admit the data packet (step 642) prior to scheduling transmission of the micro-flow, and therefore controlling network elements.

Regarding Claim 8, Roberts teaches a network switch that relies upon per flow state information including QoS and routing information to allow a network to route IP data packets

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within specific QoS constraints between a source and a destination (paragraph 0039). Per the above rejection of Claim under 35 U.S.C. 112, second paragraph, Roberts therefore teaches handling bi-directional traffic, as the source could be on either side of network 200 shown in Figure 2.

Claim 9 contains substantially the same subject matter as Claim 1, as disclosed by Roberts above. Roberts further teaches a micro-flow classifier which reserves bandwidth and determines the path of a packet (Figures 5-7), thus performing the function of Applicant's claimed admission controller.

Claim 10 contains substantially the same subject matter as Claim 2, as disclosed by Roberts above.

Claim 11 contains substantially the same subject matter as Claim 3, as disclosed by Roberts above.

Claim 13 contains substantially the same subject matter as Claim 8, as disclosed by Roberts above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claim 4** rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts as applied to claim 1 above, and further in view of Zadikian et al (United States Patent 6,631,134), hereinafter Zadikian. Roberts teaches all of the limitations of Claim 1, as described above. Further, Roberts teaches reservation means (micro-flow classifier 530) that are remote (i.e., separate components) from control means (micro-flow recognizer 520) in Figure 5. However, Roberts does not explicitly teach a software module. In the same field of endeavor, Zadikian teaches a line card which integrates software functions (column 13, line 55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the line card software taught in Zadikian with the reservation means and control means taught in Roberts in order to improve restoration times in a mesh network, as well as allow a service provider to automatically allocate bandwidth between two of a number of nodes in response to a request by an end-user.

6. **Claims 7 and 12** rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts as applied to claims 1 and 9 above, and further in view of Hauck (United States Patent 6,977,932). Roberts teaches all of the limitations of Claim 1 and 9, as described above. However, Roberts does not teach the correlated reservation requests sharing the same bandwidth. In the same field of endeavor, Hauck teaches microflows, the equivalent of Applicant's claimed correlated reservation requests, sharing bandwidth (column 18, line 30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the bandwidth-sharing taught in Hauck with the microflow management system taught in Roberts in order to provide a mechanism for processing aggregate flow blocks in a similar manner without introducing

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prohibitively time-consuming and processor intensive tasks to the network system (column 3, line 64 – column 4, line 2).

7. **Claim 14** rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Eard et al (United States Patent Application Publication US 2002/0069238 A1), hereinafter Eard. Roberts teaches an admission controller, as described with regards to Claims 1 and 9 above, that is associated with a domain of a data network, which contains means for receiving a single resource reservation request corresponding to correlated quality of service requests and control means for controlling the elements of that domain. However, Roberts does not teach the admission controller comprising means for communicating the single resource reservation request to an admission controller of a second domain. In the same field of endeavor, Eard teaches an (abstract data transfer) ADT agent, equivalent in function to Applicant's claimed admission controller, that receives a resource request and can forward it to another ADT agent, which is responsible for another domain (paragraph 0014). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the ADT agent taught in Eard with the microflow management system taught in Roberts in order to centrally store specific locations, addresses, or access protocols for each resource to be accessed (paragraph 0010).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Chriss whose telephone number is 571-272-1774. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-270-1202. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Chriss
Examiner
Art Unit 2609

AC

A handwritten signature in black ink, appearing to read "Yuxuan Pan", is located in the bottom right corner of the page.